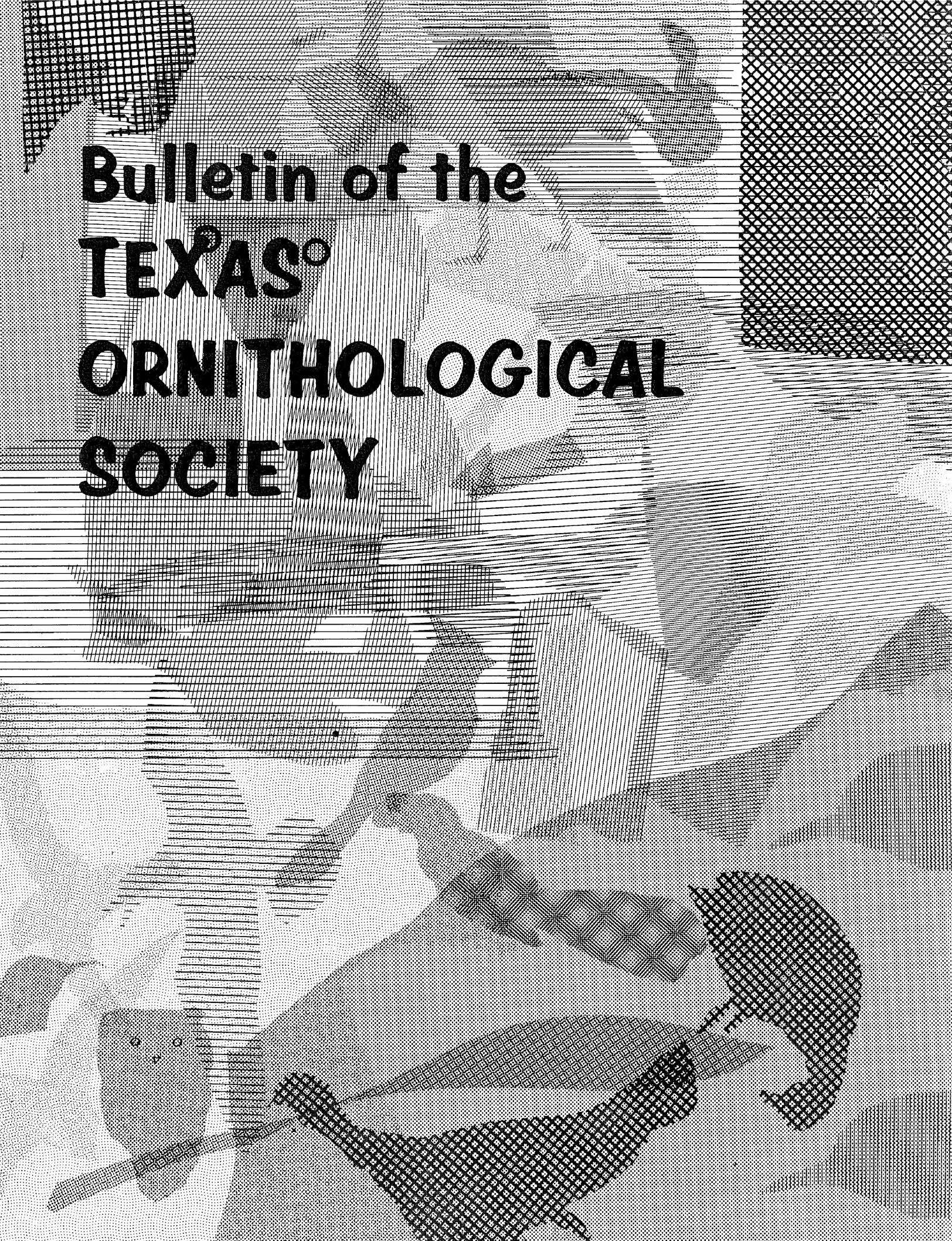
Bulletin of the TEXAS ORNITHOLOGICAL SOCIETY



Bulletin of the
TEXAS ORNITHOLOGICAL SOCIETY

July-September, 1969

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The Bulletin and Newsletter are each issued four times a year and mailed to all members of the Texas Ornithological Society not in arrears for dues. Annual dues for active members is $3.00, for sustaining members, $5.00. Inquiries regarding membership should be addressed to Mrs. I. D. Acord, 1911 Cherry Street, Amarillo, Texas 79106. Individual issues of the Bulletin may be purchased for fifty cents a copy. Original articles, reports and news items should be sent to Dr. Michael Kent Rylander, Editor, Department of Biology, Texas Tech University, Lubbock, Texas 79409. Conservation items should be submitted to Mr. Edward Fritz, Conservation Editor, 909 Reliance Building, Dallas, Texas 75201. The Texas Ornithological Society was organized in 1953 and membership is open to anyone having an interest in Texas birds, their study and conservation. The president of the TOS is Dr. A. W. O'Neil, Falfurrias; the vice-president is Mr. C. E. Kiblinger, Dallas; the Secretary is Mrs. John A. Briggs, Alice; the chairman of the TOS Conservation Committee is Mrs. Maxilla Evans.

This issue of the Bulletin *emphasizes the ambitious and exciting research programs currently pursued by ornithologists in Texas. Drs. Eric Bolen and Keith Arnold describe some of the activities at the Welder Wildlife Foundation and at Texas A&M, respectively. Both of these ornithologists are actively engaged in research, but they also share with many non-professional ornithologists a keen interest and concern for the conservation of our natural resources, and a cultivated sensitivity to nature. Eric Bolen's photographs on page 27 show some of the activities at Welder; and Keith Arnold's photograph of Dr. William B. Davis, Professor Emeritus, examining Mexican motmots (opposite page) epitomizes the active interests in ornithology which Texas A&M has maintained for many years. Keith also photographed the Lesser Bird-of-paradise* (Paradesea minor) *on page 31, one of the birds which was received in exchange from Australia.*

The Sandhill Cranes on page 35 are courtesy of Roger Nuhn of the New Braunfels Herald. *The young Golden Eagles on page 33 were photographed by Dr. Russell Strandtmann, of Texas Tech, who has worked with West Texas eagles for many years.*

The Marabou Storks (inside back cover) were photographed in Nairobi, Kenya by Dr. Richard O. Albert, who also photographed the Swallow-tailed Gulls (back cover) on Indefatigable Island, one of the Galapagos Islands. The Brown-headed Nuthatch below was sketched by Dr. John Tveten, who has recently contributed excellent photographs to the Bulletin. *The cover was designed by the Editor.*

All T.O.S. members are urged to attend the Thanksgiving meeting in San Antonio (see page 32). The T.O.S. is in a critical stage of growth in which decisions must be made regarding the organization's publications, conservation plans and future activities. It is necessary to have a healthy exchange of ideas, and the T.O.S. meetings afford an excellent opportunity for this.

ERIC BOLEN:

THE WELDER WILDLIFE FOUNDATION

On 7,800 acres near Sinton, biologists from various parts of the country conduct studies on wildlife

Spring is a time of activity at the Welder Wildlife Foundation. The migration and nesting activities of the region's rich bird fauna spark the research programs of ornithologists with equally rich backgrounds, interests and objectives. The Foundation, near Sinton, was established by the estate of the late Rob Welder for promoting several phases of wildlife conservation and management. Bird studies are an important part of this mission.

A recent development is the cooperation of the Welder Foundation with TOS and other conservation agencies in an annual census of fisheating birds along the Texas Gulf Coast. Dr. Henry Hilderbrand and Gene Blacklock, with the Foundation's eminent director, Dr. Clarence Cottam, have spearheaded the population estimates. Aerial censuses, from the Sabine to the Rio Grande, have established population "base lines" for herons, egrets, roseate spoonbills and many other birds.

These data will prove an invaluable tool for measuring population trends in the years to come. For example, the effects of hurricanes or of man's water moving schemes on these birds may be monitored on a "before and after" basis with a sensitivity not previously possible.

Student research ranks high in the Foundation program. This year Lee C. Otteni of Texas Tech began a study of barn owl ecology for his master's degree. Nesting boxes scattered throughout the 7,800 acre research area house owl families during much of the year. Lee makes regular inspections of the nests, banding the young and collecting their pellets for food analysis. A pair of thick leather gloves is a must for this work, as even week-old owlets have fearsome talons. Without gloves, the most adventuresome student is quickly discouraged from handling the young birds. Additionally, Lee runs a trapline designed to sample the small rodent populations in each of several types of vegetation. He hopes to determine whether or not the owls show any selectivity in their feeding habits and whether there may be limits to the production of owls paralleling the available food supplies.

The famous ornithologist-ecologist, Dr. S. Charles Kendeigh of the University of Illinois, is the academic advisor of PhD candidate Roland R. Roth. Roland's research zeros in on some matters of long standing and deep interest to many South Texas birders. Why, he poses, it there such a diversity of breeding birds in a broad area of southern Texas and northern Mexico while in this same area, the general vegetation type varies far less? Do different species of birds actually fill similar roles within this area? Are competitive species important mechanisms in the abundance of other birds? What are the real effects, if

—continued on page 28

LEGEND:

A. Welder research fellow, Roland Roth, collects habitat data at a roadrunner nest for his Ph.D. study of South Texas bird life. Roth is studying breeding bird communities in the mesquite-grassland complex.

B. Lee Otteni, a master's degree candidate at Texas Tech, removes a juvenile barn owl from one of over 30 nesting boxes located at the Welder Foundation. The young birds are individually banded and replaced in the boxes; their pellets are collected for food habitats analysis.

C. Welder Director, Dr. Clarence Cottam, has a background in conservation and ornithology spanning several decades. A recipient of the Wildlife Society's highest award, the Leopold Medal, Dr. Cottam's latest major publication is Whitewings: The Life History, Status and Management of the White-winged Dove, a 348-page book edited with James B. Trefethen. Dr. Cottam is shown here on the banks of the Rio Grande in the midst of prime whitewing nesting habitat.

D. Student assistant, Will Reagan, inspects a fulvous tree duck nest on one of the Foundation's three large lakes. Will, working with Dr. Cottam and the author, has helped collect data from several hundred waterbird nests in the past two years.

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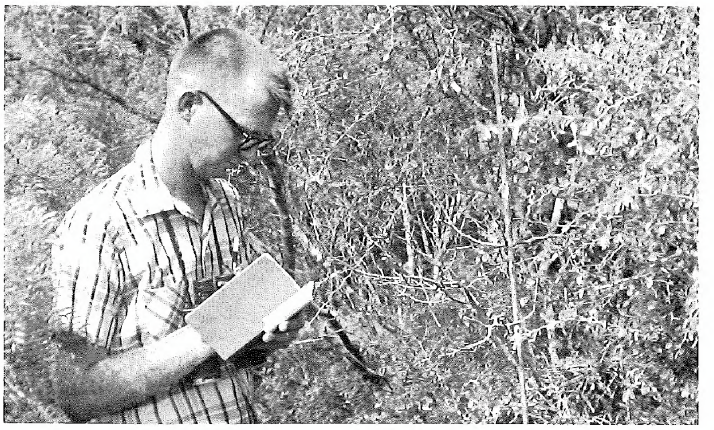

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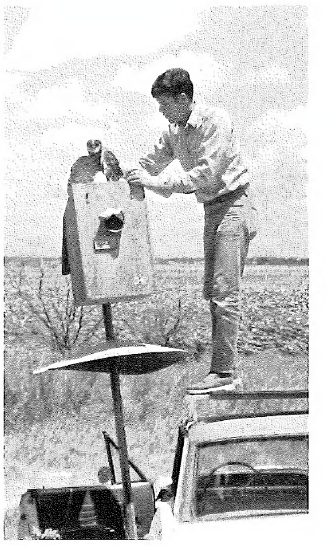

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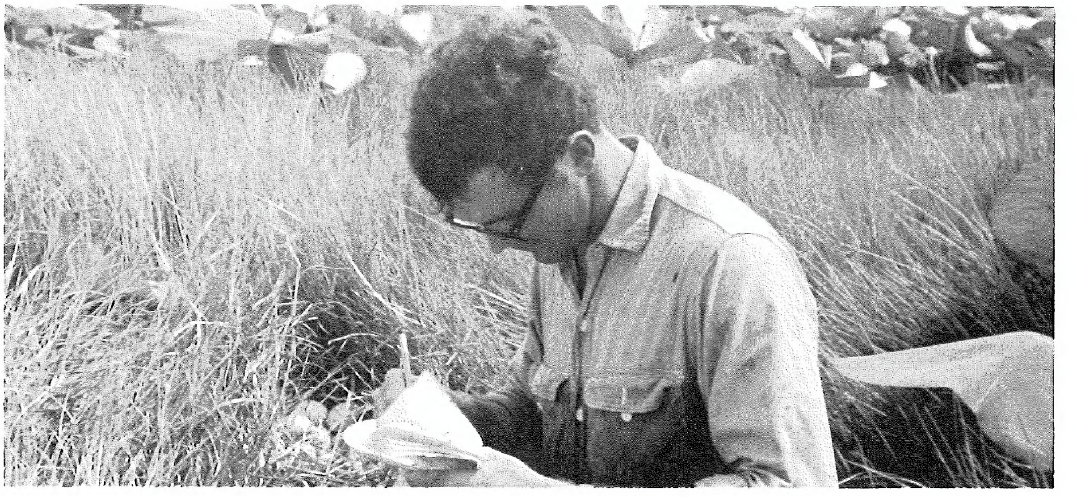

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Welder Wildlife Foundation

—continued from page 26

any, of latitude on the composition of the avian communities found in this zone? These and other important questions are now under study in Roth's complex research program.

Dr. Cottam, director of the Foundation since its inception, maintains active research projects of his own in spite of his heavy administrative duties. With summer assistant Will Reagan, Dr. Cottam has collected extensive information on gallinules, coots, grebes and fulvous tree ducks nesting on Welder's productive lakes. Diligent searches within the dense maze of water lilies and aquatic grasses uncover the nest platforms of these species . . . as well as unwelcome cottonmouth moccasins. Least bittern, green heron and glossy ibis nests are also included in his waterbird studies.

Dr. Cottam is keeping especially alert for nests of the masked duck. Repeated sightings of this "southern ruddy duck" with a black face seem to indicate that as many as 6 or 8 individual birds are visiting the Welder Foundation this year. Cottam's already abundant enthusiam jumps a peg or two when he recalls the brood of masked ducks he watched at the Foundation last year. This year he wants to find a nest.

Undoubtedly more important, we may be able to detect and better understand major precipitious declines or population explosions of species that are responding to critical environmental needs or changes. Twelve years ago, for example, Brown Pelicans were abundant nesters and permanent residents all along the Gulf Coast of the United States. During each of the past three years or more, probably less than a half dozen young birds have been produced per year on the entire Texas coast and none in Louisiana where it is listed as the "state bird" and symbol of the Louisiana seal. The accumulating evidence now suggests lethal pesticide contamination in the birds food chain as the most likely cause of this disaster.

Declines of an abundant gregarious or colonial species is difficult to detect until major declines are evident unless sound population base lines are established as a point for comparison.

The unprecedented population build-up of the Cattle Erget shows the reverse trend along the Coastal Bend area of Texas. The first single specimen observed at Welder was on May 6, 1958. In less than ten years this species has become by far the most abundant "wading bird" along our coast.

The author, Eric G. Bolen, completed his graduate research with waterfowl under the Welder Foundation's auspices in 1965 and is now Associate Professor in the Department of Range and Wildlife Management at Texas Tech University. He is shown here visiting waterbird nests in conjunction with the Foundation's 1969 summer research program.

TREE DUCK - WOOD DUCK EGG PARASITISM

Parasitic egg laying, or egg parasitism, has posed thoughtful problems for ornithologists and wildlife managers concerned with waterfowl breeding biology. Weller (1959) completed a detailed study of the phenomenon in redheads *(Aythya americana)* wherein the evolution of this behavior, as well as its effect on production, was discussed at length. Until recently, however, the instance of interspecific egg parasitism involving black-bellied tree ducks *(Dendrocygna autumnalis)* and wood ducks *(Aix sponsa)* lacked published documentation (Bolen and Cain, 1968). Moreover, wood ducks have apparently nested in the South Texas area only in recent years (Bolen and Cottam, 1967). A further instance of tree duck-wood duck egg parasitism occurred in Live Oak County, approximately 17 miles northwest of Mathis, Texas.

The down-lined nest contained a clutch of 9 wood duck and 4 black-bellied tree duck eggs when discovered on 8 June, 1969. The site was a predator-proof nesting box erected for continuing studies of tree duck breeding ecology (cf. Bolen 1967, Rylander and Bolen *in press,* and Bolen *in press).*

In the month following the nest's discovery, a female wood duck was found incubating the mixed clutch on four separate occasions. Incubation ended prior to hatching, however, as the nest was found abandoned on 16 July. The cold eggs were examined, revealing one spoiled tree duck egg and two spoiled wood duck eggs; the viability of these eggs could not be determined because of their decomposition. The balance of the mixed clutch contained dead embryos approximately three and one-half weeks of age. There was no apparent difference in the state of embryonic development between the two species; presumably, the eggs of both species would have hatched simultaneously, as recorded by Bolen and Cain (1968), if the nest had not been abandoned.—*Stephen E. Labuda, Jr.*

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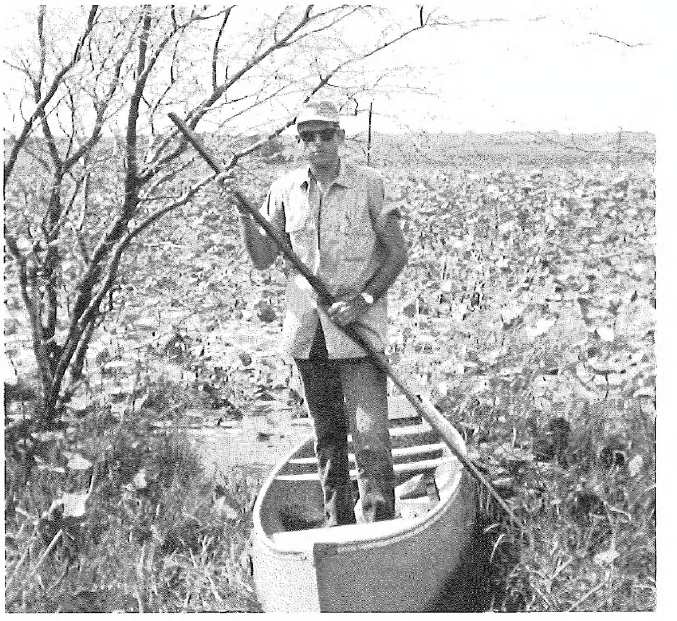

—Will Reagan

CONVENIENT TECHNIQUE FOR CHECKLIST DEVELOPMENT

While assisting Dr. Kent Rylander in the development of "A Checklist of the Birds of Lubbock County, Texas," we found the use of a computer program quite helpful. Updating on a day to day basis can be accomplished by simply repunching a single data card. The form of data presentation is quite simple and facilitates summarizing on a selective basis. For example, an abbreviated list of species expected to appear in the area in the first part of April was easily selected from the master list, and aided in verifying some old field notes of questionable authenticity.

Illustrated below are a sample page of the resulting list, the program used, and a sample data card. The symbols indicating relative abundance of a species (*,=,-, and .) were selected for visual impact, and are punched directly into a data card. The symbols are arbitrary, and others can be used with no program changes. Computer time required was 7.1 seconds for 200 species on the IBM 360/50 computer. The program is easily adapted to other computer systems and extended for special purposes as suggested above.—*Peggy Becknal and Raymond Boche, Texas Tech*

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
BELTED KINGFISHER	***	***	***	***	***	***	***	***	***	***	***	***
YELLOW-SHAFTED FLICKER	***	***	*--						-	---	-==	***
RED-SHAFTED FLICKER	***	***	***	**-	---	---	---	---	---	--*	***	***
GOLDEN-FRONTED WOODPECKER	***	***	***	***	*--	---	---	---	--*	***	***	***
YELLOW-BELLIED SAPSUCKER	***	**								**	***	***
LADDER-BACKED WOODPECKER	***	***	***	***	***	***	***	***	***	***	***	***
WESTERN KINGBIRD			-	***	**=	===	---	--				
SCISSOR-TAILED FLYCATCHER				*	***	***	***	***	...	..		
ASH-THROATED FLYCATCHER					-	--=	=-					
BLACK PHOEBE	.											.
SAY'S PHOEBE				..								
WOOD PEWEE,SP.					..	.			.			
OLIVE-SIDED FLYCATCHER				..	...	...	...	...				
VERMILION FLYCATCHER					...		..					
HORNED LARK	***	***	*--	---	---	---	---	---	---	--*	***	***
TREE SWALLOW				*	*							
BANK SWALLOW				*	*							
ROUGH-WINGED SWALLOW				-	-							
BARN SWALLOW				*	*							
CLIFF SWALLOW				*	***	***	*==	==				
PURPLE MARTIN			.									
BLUE JAY	===	===	===	===	===	===	===	===	===	===	===	===
WHITE-NECKED RAVEN	...	...	...	...	...	---	---	--.	...	...	...	...
BLACK-CRESTED TITMOUSE		.										
VERDIN	---	...	...	...	..			...	...	...	..-	---
WHITE-BREASTED NUTHATCH	.											.
RED-BREASTED NUTHATCH	..											
PYGMY NUTHATCH			.									
BROWN CREEPER									.			.

```
C   CHECKLIST OF LUBBOCK COUNTY BIRDS
C
C
      DIMENSION B(7), C(36)
      WRITE(6,1)
    1 FORMAT (1H1, 8X,46H PRELIMINARY CHECKLIST OF LUBBOCK COUNTY BIRDS
     1//27X,47HJAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC /  )
      K=4
   17 READ (5,3)  (B(I),I=1,7),(C(I),I=1,36)
    3 FORMAT (6A4,A1,36A1)
      WRITE (6,4)  (B(I),I=1,7), (C(I),I=1,36)
    4 FORMAT (1X,6A4,A1,1H|,12(3A1,1H|)/26X,13(1H|,3X))
      K=K+2
      IF (K-60) 17,6,6
    6 K=0
      WRITE (6,2)
    2 FORMAT (1H1,26X,47HJAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
     1 /)
      K=K+2
      GO TO 17
      END
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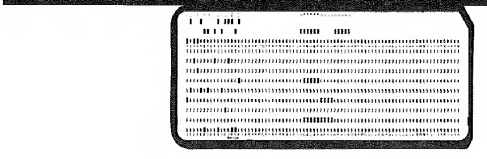


PHOTOGRAPHIC EVIDENCE FOR THE OCCURRENCE OF THE DIPPER IN WEST TEXAS

On the afternoon of May 2, 1969, while on a botanical collecting trip to the roadside park at Silver Falls on the White River (6 miles east of Crosbyton, Crosby Co.) a Dipper or Water Ouzel, *Cinclus mexicanus,* was seen feeding in the swift water just below the park dam. The movements of the bird were noted for approximately twenty minutes and it proved to be quite tame, even allowing approach to within about 20-30 feet before flying a short distance further. At the termination of the observation period the feeding sites of the bird were examined and found to consist of large concentrations of Black Fly (Simuliidae) larvae anchored to the underlying rocks.

The following morning (May 3) the senior author returned to the park accompanied by Mr. and Mrs. Robert W. Wiley, graduate students in zoology at Texas Tech. The Dipper was immediately sighted in the same location as the previous day and for the next thirty minutes was photographed in still color by Mr. and Mrs. Wiley.

This sighting constitutes the fourth published record of the Dipper in Texas (see Peterson's *Field Guide to the Birds of Texas* for previous sight records). In this particular instance, field identification of the bird by four qualified individuals supplemented with color photographs should provide adequate criteria for removing this species from the list of hypotheticals occurring in Texas. — *Stanley D. Casto and Herschel W. Garner, Dept. of Biology, Texas Tech University.*

NEWS:

An expert on wildlife protection and other environmental problems has joined Shell Chemical Company.

The company has created a new position of senior staff wildlife specialist and filled it with William F. Gusey, who spent fourteen years with the Departments of Interior and Agriculture. Gusey's responsibilities with the departments were related to wildlife management and pesticides surveillance and monitoring. His last position was assistant chief, division of wildlife services, Bureau of Sport Fisheries and Wildlife.

With Shell, Gusey will guide the evaluation of the immediate and long-range effects of chemical pesticides on wildlife. The program specifically aims at minimizing possible effects of Shell Chemical pesticides on fish, wildlife and their environment.—*Shell News*

* * *

The September issue of the Bulletin of the Oklahoma Ornithological Society contains the following reports on Oklahoma birds: The western sandpiper in Oklahoma (a review); winter records for the sora rail in Oklahoma; knot in Cimarron County; report of an albino barn swallow; Baltimore Oriole parasitized by brown-headed cowbird; wintering of rose-breasted grosbeak in Okmulgee County; and winter record of lesser goldfinch in Comanche Co.

ORNITHOLOGY AT TEXAS A & M

The history of ornithological research in Texas indicates sporadic activity rather than a continued program based on long-range plans. To recognize this is to admit that the great avifauna of Texas has not received its due share of attention. Such attention, of course, depends on a strong research and teaching effort in the presence of a good collection of specimens and books. These essentials are present at Texas A&M University and provide a focus for ornithological research in taxonomy, life history, ecology, behavior, and management.

by KEITH ARNOLD

The history of ornithological research at College Station started in 1936, when the Texas Cooperative Wildlife Collections were begun. These collections have shown steady growth and now include approximately 50,000 fishes, 28,000 reptiles and amphibians, 23,000 mammals, and 8,000 birds. Along with the natural emphasis on Texas representation, the collections are excellent for many parts of Mexico, and have representation from all continents except Antarctica.

These collections had their beginning when Walter P. Taylor came from Arizona to head the newly-formed Texas Cooperative Wildlife Unit. Taylor brought over 100 vertebrate specimens which served as the nucleus of the Texas Cooperative Wildlife Collections.

The arrival in 1937 of Dr. William B. Davis, to head the department which has evolved into the current Department of Wildlife Science, also marked the beginning of a 15-year span of cooperation between the Unit and the Department. Emphasis was placed upon biological surveys of the ecological regions of Texas. These surveys were conducted in Walker County (East Texas Pinelands), Harris County (Coastal Plains), Kerr County (Hill Country or Edwards Plateau), LaSalle County (Rio Grande Plains), and Culberson County (Trans-Pecos). Numbers of representative vertebrates were added to the collections by these surveys. In addition, a biological survey was completed in the Big Bend country just prior to the time this region became a park. Associated with the Big Bend survey were collecting efforts in the adjacent Black Gap area.

From 1941 through 1952 summer field trips were conducted as part of the departmental curriculum. Trips to Mexico were made in 1941 and 1942. During World War II the summer trips were continued to the Trans-Pecos of Texas and to the state of Colorado. Field trips to Mexico were resumed in 1948 and continued into the 1950's when the departmental summer trips were discontinued.

Since the beginnings of these collections, expansion has been aided in part by gifts from former students. During World War II birds were received from China, India, New Guinea, and French Morocco, as well as from various parts of the United States. Particularly noteworthy were the more than 200 birds from China, collected by Bryan P. Glass while serving with military intelligence.

Continued expansion of the bird collections will be determined by the needs of the educational and research programs in the Department of Wildlife Science. Essentially, this means that specimens will be accumulated as dictated by research interests of the staff and students. However, part of the increase results from a continued effort to add representatives from all parts of the world through exchange of specimens or by purchase. During the past two years such trades have added representatives of more than 30 avian families new to the collections, as well as many genera and species. At present, 116 families and over 925 species of birds are represented in the Texas Cooperative Wildlife Collections.

Undoubtedly, specimens collected in Texas will increase, for much of the ornithological research will take place in the State. In particular, I anticipate the continued deposits of important ornithological records from Texas. In some instances unusual birds will be documented by a photographic record instead of an actual specimen.

The neotropical region will hold the interest of some, including myself, and gradually the birds of this region will have greater representation in our research efforts. Among the present neotropical material in our collections are a number of bird families that have been added by Drs. W. B. Davis and D. C. Carter and their students during studies in Middle and South America.

With the beginning of a program of Wildlife Ecology in East Africa and parts of South Africa, I anticipate that specimens from this continent will be forthcoming.

The collections at Texas A&M University are a part of strong research and teaching programs. Recent years have seen rapid expansion within the Department of Wildlife Science and with this has

come an expansion in research and teaching. The separate undergraduate courses in ichthyology, herpetology, ornithology and mammalogy now have their counterparts in graduate level courses. The graduate Systematic Ornithology was first presented in the fall of 1968. To my knowledge, this course is unique among the offerings of the colleges and universities in Texas.

Current research activities are many and varied, and include studies in behavior, life histories, taxonomy, control, and management. These studies include ducks, doves, chachalacas, and common snipe, among the game species, and non-game birds such as blackbirds, shorebirds, and tyrant flycatchers.

Dr. Harold Irby directs a number of studies on game species. Current projects are diverse in goals and subject matter. A banding program on white-winged doves in Mexico is helping to establish a better understanding of the relationships between breeding populations of these birds in Texas and in adjacent parts of Mexico. Another study on this dove is directed towards the renesting activity of the populations in the Rio Grande Valley of Texas. Another study in the Rio Grande Valley concerns the ecology of chachalacas. The populations of the endangered Attwater's prairie chicken are the concern of a project on reproductive physiology in this species. Ducks are being studied on the Trinity River delta of the Texas Coast, an area that will soon be affected by a major water control project.

Most of my own research efforts and those of my students are concerned with non-game birds. One major project is with the populations and social structure among blackbirds, particularly among the boat-tailed Grackle. The blackbird family is well known for its ability to depredate farm crops. Another study includes banding of the common snipe. Although a game bird in many states, this species is not well known in Texas. The four-year banding program is aimed at a better understanding of the wintering snipe populations in Texas and the relationship between snipe concentrations, vegetation and weather. Two pairs of species of tyrant flycatchers are the dissertation research of one student. This research is part of a comprehensive study of species-pair relationships of vertebrates in the Trans-Pecos. Generic relationships of certain subfamilies of shorebirds (Scolopacidae) are the topic of another doctoral dissertation. Texas birds for which subspecific problems are currently being investigated include elf owls, great-horned owls, and white-throated swifts. The wren genus *Thryothorus*, including the carolina wren, remains one of my primary research interests and I anticipate prolonged studies on the taxonomy, ecology, and behavior of these birds.

Diversity, then, certainly exists in the research in ornithology at Texas A&M University. Future research will depend to some extent upon the success of the present programs and upon continued and additional financial and moral support. The program at Texas A&M University can and should benefit all who have an interest in birds, and I hope that these people will want to support our efforts. — *Department of Wildlife Science, Texas A&M University, College Station.*

NEWS:

A Texas Technological College research team of scientists — including a biologist, ornithologist, wildlife management expert and livestock specialist — issued a lengthy report based upon an eight-month study of the golden eagle as a predator. Although many things were learned, the scientists pointed out the necessity for further study before definite conclusions can be reached.

The study was sponsored by the Bureau of Sport Fisheries and Wildlife, the National Audubon Society and the National Wool Growers Association through a grant to Texas Tech's International Center for Arid and Semi-Arid Land Studies.

Participating in the 1968 study were Biology Professor Robert L. Packard and Wildlife Management Professor Eric G. Bolen as project leaders. Working with them were Professor M. Kent Rylander, ornithologist, and Professor Frank A. Hudson, professor of animal science.

The field research team consisting of graduate students compiled statistics on eagle numbers in three important ranching areas in Texas and New Mexico, traditional wintering grounds for migrant eagles. These areas also contain a smaller number of eagles year around.

Survey routes covered 4,500 square miles in Presidio, Jeff Davis, Culberson and Hudspeth Counties in West Texas; 5,000 square miles in the Edwards Plateau area of Central Texas in Kerr, Edwards, Bandera, Real, Kinney and Uvalde Counties; and 2,400 square miles in McCulloch, San Saba, Llano, Lampasas and Mason Counties.

The New Mexico study area included 10,000 square miles near Roswell, an area for which aerial census figures were available for every year since 1964. The area customarily produces approximately a quarter-million lambs per year. The Bureau of Sport Fisheries and Wildlife provides the annual eagle census.

The team summed up their short-term study as follows:

"Based upon the aerial census data available to us and on our interpretation of these data, we are unable to report the location of any meaningful populations of wintering golden eagles in the Edwards Plateau."

"The census data for the Trans-Pecos area of Texas indicated eagle populations of 1-3 eagles per 100 square miles, or a total population of approximately 60-160 birds. We searched for nests in areas of previous use but located only a single active nest where one eaglet was successfully reared."

"Eagle populations in New Mexico were, by comparison with Texas, quite large. The over-all population in the census area has been estimated as numbering 900 birds in the winter months; densities may reach 8-9 birds per 100 square miles on the average."

"Ranchers we visited in each area stressed that the 1968 eagle population present during their respective lambing seasons was not of the same size as other years. They believe rather large annual fluctuations occur in local eagle populations (wintering and/or nesting). Our inability to locate many active eagle nests in 1968 concurs with at least the latter point. The population estimates for eagles wintering in New Mexico have not varied greatly in recent years. However, larger and inconsistent variations appear in the Trans-Pecos data.

"The Tech Eagle Team found only one instance of known eagle predation that occurred during our survey; this happened in the Edwards Plateau Region and involved a bald eagle."

"More livestock carcasses were located per man-hour research in the Edwards Plateau Region (Eldorado study area) than elsewhere. However, using criteria we established from the literature and from our own observations, we think that approximately 10 per cent of these carcasses were actually victims of predation (All types). Stillbirths and other circumstances seemed to account for many of the other losses."

"About 38 per cent of the dead lambs or kids found in the Val Verde Region were attributed to predatory losses. Only two dead lambs were discovered in the Guadalupe Mountain Region; of these, one appeared the victim of predation, the other was a birth fatality."

"Ranchers we interviewed indicated that little or no eagle damage occurred during the 1968 lambing season."

"Examination of materials found in eagle nests consistently revealed the extensive use (both in frequency and in composition) of jackrabbits and cottontails. Remains of livestock were found in most nests (average of about 70%), but represented only two animals per nest. The competitive aspects of avian versus ground predators, considering the availability of either small rodent populations or rabbits, seems an important ecological relationship acting on any damage eagles may cause to livestock."

"An appraisal of the habitat suggested that brush cover serves to protect important buffer foods from eagles (or ground predators) and that livestock may then be sought as food instead."

Despite the fact the studies did not fully coincide with the beginning of the various lambing seasons the research team members stated that there is no question that golden eagles do, upon occasion, kill young lambs. They pointed out, however, that it is almost impossible to assess the exact amount of this economic loss because of the eagle's habit of feeding upon carrion. Also, the presence of lamb carcasses or parts of carcasses in eagle nests does not reflect the true picture, according to Dr. Eric G. Bolen, because many lambs which die from natural causes are represented in the carcasses found in eagle nests.

Regional Director William T. Krummes of the Bureau of Sport Fisheries and Wildlife in commenting upon the report received from Texas Tech, called attention to the fact that this report was made by a team of specialists, each representing a diferent discipline.

Calling attention to the scientific necessity for further study, team members Bolen and Packard stressed that they had recommended further research based upon intensive study of sheep flocks in areas of relatively heavy eagle populations, rather than a continuation of the extensive study of the huge southwestern sheep production area. Concrete proposals for the continuation of the study have been made, Dr. Bolen stated.

FALL TOS MEETING

November 27, 28, and 29 are the dates set for the Fall Meeting of TOS to be held in San Antonio with the San Antonio Audubon Society acting as hosts.

Headquarters will be the Sheraton San Antonio Motor Inn, 1400 Austin Highway (Hwy. 81 North, Business Route). Registration will begin at 3:00 Thursday afternoon.

Besides field trips scheduled for Friday and Saturday, a social hour is planned for Friday evening at which time a 30-minute colored slide program of Texas birds will be shown by Mr. Gerald Harding of SAAS. The Board of Directors meeting also will be held Friday evening.

Saturday evening's banquet will mark the formal close of the meeting, but if there are any members who do not have to depart early Sunday morning, a trip to the San Antonio Zoo which is rated one of the top four in the nation and which boasts an extensive aviary is suggested.

While it is likely that most registrants will recognize the convenience of staying at the Sheraton, there are a number of other acceptable motels, motor hotels and mobile home parks in the area, several of which are listed below. (The Sheraton is extending quite a few courtesies to the convention and to the hosts in their preparations.)

SHERATON SAN ANTONIO MOTOR INN
1400 Austin Highway
Single-$11.00, Double-$13.00

ALHOA INN MOTEL
1435 Austin Highway
Single-$8.50, Double-$10.50

WESTERN SUN MOTEL
1031 Austin Highway
Single-$8.00, Double-$12.00

FLAMINGO MOTOR HOTEL
1131 Austin Highway
Single-$7.00 & $8.00, Double-$10.50 to $14.50 for 2

RODEWAY INN MOTEL
1259 Austin Highway
Single-$9.00, Double-$12.00 ($14 for 4)

MOTEL MOSS GARDENS
200 Austin Highway
Single-$9.00, Double-$12.00 ($14 for 3)

NEWS, cont'd.

ITHACA, N.Y. — George Miksch Sutton, one of the world's most distinguished ornithologists, bird artist and writer on birds, was presented the third annual Arthur A. Allen Award for outstanding contributions to ornithology at Cornell University Saturday, Sept. 13.

Sutton received the award, established by Cornell's Laboratory of Ornithology, at a dinner at 7 p.m. in the Statler Inn on the Cornell campus. More than 100 conservationists and ornithologists from all parts of the country attended.

Established in 1966, the award is in the form of a medal. It honors the memory of Arthur A. Allen, famed ornithologist and teacher at Cornell for nearly half a century. Allen's teaching and research in the early days of ornithology are said to have inspired many of his students to enter the field of ornithology. He is credited with interesting countless numbers of persons in the field of ornithology as an avocation through his popular writings, photography and public lectures.

Sutton obtained a doctor of philosophy degree from Cornell in 1932 and was curator of birds at Cornell from 1931 to 1945. He joined the faculty of the University of Michigan in 1945 and in 1952 went to the University of Oklahoma as a research professor of zoology, the post he now holds.

A native of Bethany, Neb., he spent his childhood and early youth in Minnesota, Oregon, Illinois, Texas and West Virginia. He earned his undergraduate degree at Bethany College, Bethany, W. Va. After graduating from there, he served on the staff of the Carnegie Museum from 1919 to 1925. He was state ornithologist for the Pennsylvania Game Commission from 1925 to 1929 when he left to come to Cornell.

He has written several books on ornithology and has illustrated many books besides his own. — *CORNELL UNIV.*

* * *

AUSTIN — The Texas Parks and Wildlife Department is embarking on a study of the red cockaded woodpecker which may help save the little bird from extinction.

The three-year study has been approved with the aim of determining the distribution and habitat requirements of this seven-inch, black-and-white ladderback bird.

Disappearing habitat seems to be the problem because of the bird's stringent requirements.

They seem to nest and roost only in over-mature pine trees with red-heart disease. The tree must be alive and vigorous enough for gum to flow freely when the woodpecker pecks through the cambium.

"Such trees are scarce, and this creates doubt as to the future of the species," says Dan Lay, biologist for the Parks and Wildlife Department and project leader for the study.

Lay says with adequate information as to the present distribution and requirements, it should be possible to develop plans for saving the bird from extinction. "The bird is not a singificant part of the ecosystem, yet its preservation may serve to focus public attention on habitat and environmental problems," says Lay.

Some preliminary work has been done on an informal basis. Birds have been located in approximately 10 locations, and suitable study areas are available for the work planned.

The formal study will start with the location of nest trees throughout the range and the recording of pertinent data for each.

Any nest trees which have died recently will be cut, and measurements of the hole, cavity, tree, and extent of red-heart disease will be recorded. Observation will be repeated in subsequent years to determine the rate of mortality.

The woodpecker will be followed on a systematic basis to determine the size of the territory, feeding habits, trees utilized, defense of territory, and hole construction.—*TEXAS PARKS & WILDLIFE DEPT.*

NOTICES:

Sadly we report the untimely death of Sherwood Levy Davis, 34, TOS member and resident of Baytown. He was killed in a construction accident on March 13th in Jamaica, West Indies. He and his wife, Sharon, were enthusiastic birders in Texas and Louisiana and keenly interested in conservation of all forms of wildlife; their birding years were about equally divided between the two states and Levy will be greatly missed in ornithological organizations. His boundless enthusiasm, curiosity and love of wildlife were contagious and enviable. He was always ready to help the new member and never too hurried to go back and show someone a bird. —*Bessie E. Cornelius*

* * *

A part of a study of the ecology and population dynamics of the Mississippi Kite, adult and juvenile birds are being color-tagged, banded with standard U. S. Fish and Wildlife bands, and released in areas of southwestern Kansas, western Oklahoma, and north central Texas. Marked birds carry a large plastic oval on the humeral area of each wing, and colors used have been white, red, orange, yellow, dark green, dark blue, and light blue. Information desired includes: color of plastic oval on each wing; date, time and location of sighting; activity of the bird; and observer. Please send information to: James W. Parker, Museum of Natural History, University of Kansas, Lawrence, Kansas 66044.

RECENT LITERATURE:

LITTLE BLUE HERONS had only 14.5% nesting success in Houston County, Alabama. This low nesting success was due to high predation pressures from gray rat snakes, barred owls, and fish crows, as well as the presence of cattle egrets which were attempting to nest nearby in mid-July. *Wilson Bull. 80:458-466.*

* * *

The first recovery of a BAR-TAILED GODWIT banded in North America and one of the longest over-water movements on record for any species of bird was recorded by Frank Rowson at Bay of Plenty, New Zealand, October 28, 1967. The bird was banded on May 31, 1966, on St. George Island in the Pribilof Islands, Alaska, 5,288 nautical miles away from New Zealand. *Wilson Bull. 80:490-491.*

* * *

SANDHILL CRANES were found to be unexpected predators of blue geese and willow ptarmigans on the western shore of Hudson Bay. The cranes were found to eat both the eggs and hatched young. One crane stomach was found to contain a collared lemming as well. *Wilson Bull. 80-421-425.*

—*Russell Strandtmann*

The Texas Legislature has enacted bills on eight planks of the 18-plank state platform of Texas Ornithological Society, a good record for our conservation committee:

BILLS WE SUPPORTED

The bills which we supported actively were as follows: (Refer to your Conservation Progress Nos. 15, 16, and enclosures with No. 17 for further descriptions.)

BILLS PASSED

SCR 38—Bay and estuary survey by Sen. A. R. Schwartz.

HB 414—Scientific and Wilderness Areas Acquisition Amendment, by Sen. Roy Harrington and Rep. Fred Orr.

SB 5, 6, 7, 48, 125, 138, 147 and 225—Air Pollution and Water Pollution Control Amendments by Sen. Criss Cole.

SCR 84—Natural Resources Agency Reorganization Study, by Sen. Wayne Connally and Rep. Fred Orr.

SB 170—Extension of Alligator Protection to all Counties by Sen. Roy Harrington and Rep. Clyde Haynes.

HB 310 & 736—Protection of Hawks, Owls, Woodpeckers, Roadrunners and other species of birds, by Sen. Don Kennard and Reps. Ben Atwell and Neil Caldwell.

HB 790—State Parks Foundation, by Sen. Don Kennard and Rep. Bob Armstrong.

SB 324—Public Parks Protection, by Sen. Don Kennard and Rep. Dave Finney.

HSR 370—Study of Harmful effects of Chlorinated Hydrocarbons, by Rep. John Bigham.

SB 173—Exemption of the Nature Conservancy of Texas from property tax, by Sen. A. M. Aiken and Rep. Ben Atwell.

Nineteen bills to bring additional counties into Regulatory Authority of Parks and Wildlife Department. (Leaving only about 32 of our 254 counties regulated directly by the Legislature.)

PASSED BUT VETOED

Package of beach, bay and estuary bills, by Sen. A. R. Schwartz.

BURIED IN COMMITTEE

Package of stronger pollution control bills by Rep. Rex Braun.

Natural Rivers Bill, by Sen. Don Kennard and Reps. Ben Atwell and Neil Caldwell.

All bills to limit shell dredging, by Reps. Dick Cory, Will Smith and others, and Sens. Bill Patman, Roy Harrington and others.

Bills to encourage use of refundable bottles, by Rep. John Hannah.

BILLS WE HELPED DEFEAT

HB 797—Splitting of Parks and Wildlife Commission by Rep. Rayford Price and Sen. John Bates.

Bill by Rep. Charles Jungmichael and Senators Charles Herring and Murray Watson to prevent the state from charging entrance fees at state parks.

Bill to double the bounties on wolves, coyotes, etc.

CONSOLATION PRIZES

NATURAL RIVERS: Rep. Ben Atwell quietly managed to have funds transferred from the Water Safety Fund to Parks and Wildlife for the purpose of making studies of natural rivers for preservation and float trip use.

DREDGING: The Parks and Wildlife Commission in April strengthened its rules so as to prevent shell dredging within ½ mile of shore and in shallow waters found to be important nurseries for marine life.

PERSONAL VISITS WERE THE KEY

In the accomplishment of the foregoing ends, Mr. Fritz made the following trips to Austin: Jan. 14-15, Feb. 25-26, Mar. 24-26, April 21-23, April 28-30, May 5-7, May 8, May 12-13, May 19-21.

Twice, conservationists from across the state converged on the Legislature. The second time, May 12 and 13, the following came and visited the Governor, the Lieutenant Governor, and key legislators, and had dinner with Sen. Charles Wilson and Rep. Bob Armstrong:

Mary Jane Moore, San Antonio
Lisette Mueller, San Antonio
Delbert K. Weniger, San Antonio
Mrs. Emily Bird, Fort Worth
Mrs. Jessie Wade Smith, Fort Worth
Mr. and Mrs. E. B. Kinsey, Burnet
Mrs. Richard Block, Dallas
Miss Becky Block, Dallas
Mrs. J. Claude Evans, Dallas
Mr. Edward C. Fritz, Dallas
Mr. and Mrs. Dan Williard, Austin
Mr. and Mrs. Burgess Griesenbeck, Austin
Mr. and Mrs. Richard A. Shannon, Austin
Mrs. Margaret Louise Hancock, Austin
Mr. William Wood, Austin
Mrs. Donald Goodson, Austin
Waldi Browning, Austin

—Eric Bolen

A special accolade is due to Fort Worth Conservationists who sponsored a drive in favor of the Public Parks Protection Bill, including an invasion of Austin. Mrs. Emily Bird, Mrs. Charles Crabtree and Mrs. G. W. Parker, Jr. were among those who led this effort.

The Travis Audubon Society and Austin Group of the Sierra Club were highly influential by rallying members to visit the legislature at key times.

Mr. John L. Spinks, Jr., Southwestern Field Representative of the National Audubon Society, provided valuable information on the pesticides and anti-dredging bills. Mr. Delbert K. Weniger, Conservation Chairman of the Lone Star Chapter of the Sierra Club, spent a day in Austin and issued a statewide bulletin. Margaret Louise Hancock was especially helpful in our fight to defeat the bill that would split Parks and Wildlife and would block state park entrance fees.

BIG THICKET NEEDS MORE RESOLUTIONS

Senator Ralph Yarborough would like to have more resolutions favoring a Big Thicket National Area of at least 100,000 acres. Conservationists should line up organizations of any kind and any location to pass such a resolution. Thirty-five groups have sent in such resolutions, the latest of these being the Big Thicket Association, Texas Garden Clubs, Inc., The Southwestern Association of Naturalists, and eight branches of the Texas Federation of Women's Clubs. Margaret Louise Hancock is due special recognition for lining up those eight branches. The Texas Forestry Association has obtained more than one hundred resolutions for an inadequate 35,000 acre National area, including Chambers of Commerce, local garden clubs and hunting and fishing clubs.

If you want a proposed form for a resolution, write our chairman.

RECOMMEND CONSERVATIONISTS FOR APPOINTMENT

For the ecologist slot on the National Resources Agency Study, conservationists are recommending that Governor Smith appoint Dr. Dan Williard, a member of the TAS Conservation Committee.

For the biologist slot in the Chlorinated Hydrocarbons Study Committee, conservationists are recommending that Gus F. Mutscher, Speaker of the House of Representatives, appoint Dr. Clarence Cottam, Chairman of the TAS Conservation Committee.

The more letters that we write to the Governor and Speaker in Austin recommending these or other nominees, the more likely we are to obtain the appointment of qualified men to these key committees.

LETTERS TO THE EDITOR

Mr. Albert J. Kirn lived in Somerest, Texas, near San Antonio, from 1922 until 1950 when he died. He sent migratory bird reports to the U. S. Biological Survey from 1923 until 1946. He sent these reports from Copan, Washington County, Oklahoma in 1916 and 1917, from several places in Kansas in 1918 and 1919, and from Glenrio, New Mexico in 1920. Mr. Kirn was interested in all branches of natural history and had an extensive collection which included bird skins and museum mounts, birds' eggs, small mammals, reptiles, insects and shells. When he died, some of his mammals were presented to the San Antonio Museum — now Witte Memorial Museum, but his library, presumably his notebooks and journals and the main body of his collection were presented to St. Mary's University at San Antonio. When St. Mary's became crowded for space, they donated the collection to the Natural Science for Youth Foundation, who, in turn, distributed it among their affiliate museums. Somewhere along the line the notebooks and journals were lost.

I hope to locate these notebooks. *I am gathering material for a biographical article about Mr. Kirn.* I plan to compare his Copan, Oklahoma records with current records of this area, and finally with records obtained over the years after a dam is built on the Little Caney River one mile southeast of Copan. I intend to compile an annotated list of his scattered natural history collection and prepare a bibliography of his published notes and articles. I also plan to make a complete survey of his work.

I am eager to correspond with any one who knew Mr. Kirn or knew of his work. — *Mrs. John F. Messerly, 344 S.E. Elmhurst, Bartlesville, Okla. 74003.*

* * *

The guest editorial of the *Bulletin* for April-June, 1969 (Kay McCracken: Collecting Birds for Science) is deserving of comment.

First, let me compliment Mrs. McCracken for having sufficient concern to take the time to write the editorial. Few of us follow up our convictions in such a direct manner.

As to extra-territorial occurrences of birds and other rarities, I agree that some birds have been in such a time and location as to permit photographing of the unusual birds in question and/or for observation by *competent* observers. Note the emphasis on competent. There are so many variations in plumages of the many species of birds in Texas (or potentially occurring in Texas) that even the most experienced birder can become confused. Add to this the fact that many birders would be unfamiliar with birds that do not regularly occur in their area, and the difficulties are compounded. Allow me to give examples. In recent months I have received calls concerning Evening Grosbeaks, Black Phoebe, Rose-throated Becard, and several other "rarities" for this area (Brazos County). On every occasion where I visited the location of the siting, no rare bird could be found, nor were any ever seen after I was notified. The Rose-throated Becard, incidentally, was later identified by the original observers as a Rose-breasted Grosbeak. I believe the Evening Grosbeak records to be valid, but on all occasions the persons admitted that they were not positive. I believe that the occasions when an unusual bird remains long enough to be photographed and viewed by many observers are few. The more spectacular ones are reported in journals and newspapers. Two questions come to mind: "Who determines if a birder is competent?" and "How many birders carry the *proper* photographic equipment into the field when the best chances for finding unusual birds occur?"

Mrs. McCracken's idea regarding the use of "accidental" kills is a good one, but one that is not a feasible solution. First, most road kills are not usable. The birds are usually so battered that a decent study skin can't be made. Secondly, how many birders would take the time to examine the many beach or road kills, remember to record the appropriate data (locality and date), and then take the specimen to competent preparation or freeze the specimen until such time as it can be prepared. Finally, many scientific studies require information or materials that usually cannot be obtained through accidental kills (time alone would prohibit this). Such studies include parasites, anatomy, and food habits, among others.

Finally, our museum drawers are not locked. The collections are available for identification purposes as well as scientific research.

I am distressed to think that scientific collection may be viewed by some as satisfaction of a person's vanity and I hope that no such person in Texas (or any state) exists. There are legitimate reasons for scientific collecting, even though some birders may not agree with the objectives of each particular study. — *Keith A. Arnold, Department of Wildlife Science, Texas A&M University, College Station.*

LETTERS TO THE EDITOR, continued . . .

A great deal has been written about our National bird, the Bald Eagle, but very little of this writing has stemmed from observations made in Texas. In favorable places along the Texas Gulfcoast this bird is still relatively abundant. The word abundant is used with caution and with the qualifier relative. It is nowhere really common, but for such a large ostentatious bird it has managed to maintain its number well against the advance of civilization.

Observations for this writing were made in the vicinity of Refugio, Texas, and if one would swing a circle with a thirty-five mile radius around this city it would fairly well describe the area studied. This circle would encompass all of Refugio County and parts of Goliad, Victoria, Calhoun, Aransas, San Patricia, and Bee Counties. This is essentially flat land of open prairie and brush which is dissected by the Aransas, Mission, San Antonio, and Guadalupe Rivers. In addition, it contains several important creeks and bayous and during wet weather is adorned by many shallow lakes. On the east it is bounded by Copano, Aransas, and San Antonio Bays. Heavy timber is largely limited to the water courses, although there are isolated patches of Post Oak containing trees of significant size.

The Bald Eagle has often been labeled as a carrion eating scavenger — an indictment distinctly unpraisworthy for our National Bird. Also, a great deal of emphasis has been placed on their hardy appetites for fish. Both of these food habits have been reported numerous times by multiple observers of unquestionable reliability, but reports have not been made on Texas eagles.

A hungry bird or a hungry animal, including man, that is at all flexible in its food habits is apt, out of circumstance rather than choice, to eat most anything. In the South Texas habitat it would be seldom necessary for the eagles to eat carrion and seldom convenient for them to eat many fish. The local eagle is no scavenger, fisherman, or robber of Ospreys but is rather a hunter of considerable dash and skill.

In the wet weather months the prairie is dotted with numerous shallow lakes, many of which go dry in the summer. Such lakes would not yield many fish but they are abundantly populated with ducks and geese, making them favorite hunting grounds for the eagles. Several times I have seen eagles pursue a flock of geese in full flight, getting one goose, always one near the rear of the formation, which for some reason separates from the flock and flies off at a tangent. This segregated goose is then summarily seized in mid-air or is driven all the way to the ground or water where it is picked up. The faster flying ducks are attacked in the same manner but less often and with less success. A flock of ducks will frequently make a clean escape but a flock of geese, once under serious attack, invariably gives up one of its members. This exciting chase seldom covers as much as a mile and can usually be seen in its entirety from one vantage point.

It seems a matter worthy of social, physiological or moral consideration as to why such strong migratory fliers surrender themselves after so brief a chase. Can it be the seemingly sluggish eagle belies his speed and is actually so fast that the victim is forced to fly well beyond its optimal speed resulting in rapid exhaustion? Is the victim so fear struck and demoralized that it is unable to expend its best effort? Or does one bird, perhaps one on the low end of the peck order, make a martyr of itself and sacrifice its life for the good of the group?

Coots frequently provide a meal but are not secured in the same dramatic manner as the ducks and geese. They are often taken by surprise while sitting or are picked up as they skitter across the water. While I have actually been witness to seizures of only ducks, geese and coot, examination of residue at nesting sites attends to a supplementary diet of jackrabbits, cottontails, rats, opossum, skunk and box turtle. The remains of geese and ducks, however, dominate the scene. In particular, fish remnants have not been noted.

At various times since 1938, I have known of more than twenty occupied nests, at least sixteen of which I am reasonably sure belonged to different pairs of birds. All nests were in close association with bodies of water varying in size from a small creek to Aransas Bay. The majority were in wooded areas along rivers. The selection of a nest site near water is probably primarily because the water avails ducks and geese and secondarily because most of the eminently suitable nesting trees are near water. I doubt if their appetites for fish have much influence on the selection as three nests were along the oilwell polluted portion of the Mission River — a stream notably poor in fish life.

The huge stick nests are placed usually fifty to seventy feet up in oak, pecan, or cottonwood trees. Several have been found at lower elevations in scrub Liveoak, and one was only about eight feet up in a Mesquite tree. Because the nests are so large, they lend themselves well to survey by airplane, and during the first part of their nesting period the deciduous trees are without leaves, a fact which further enhances the visibility of nests. Some of the nests I have observed have been seen only from the air and not visited on the ground at all. The behavior of an incubating bird to the buzz of a plane is variable. Some leave the nest on the first buzz while others require several approaches. Still others sit tight and will not get off the nest at all. Another factor to consider is how close you can buzz a nest with safety to yourself. When the nesting tree is well isolated one can often fly as close as 30-40 feet but when other trees are close by one must keep a safer distance. Perforce I have always left this matter of judgment entirely up to the pilot.

The same or an alternate nest is used year after year so once a nest is built, preparation for immediate use consists only of correcting the past year's depreciation. This remolding begins about the middle of November and amounts to relining with either fresh dry grass or Spanish moss and adding a few sticks around the perimeter. Egg laying begins late in the year or early in the nesting season, depending on how you look at the matter. Birds have been found incubating between the dates of November 28th and January 14th. The top of the season, however, is between December 10th-December 25th. One to three eggs are deposited, most often two. Young downy birds can usually be seen by the last of January and large immatures ready to leave the nest by the last of March. The adult birds are very solicitous about their nest, flying about and calling with their peculiar nasal squeal when an intruder comes within 150 yards of their home. Their voice gives the impression of gross inefficiency of expired air. It is not loud but one gets the feeling that a lot of effort is expended; enough air is being expelled to produce a really loud call, but the loud call is never forthcoming. In some respects it reminds me of some of the old steam whistles that blow a lot but whistle very little, although the notes and quality are, of course, entirely different from that of the eagle's call.—*Travis Meitzen*

ADDENDA:

The above notes were written about fifteen years ago but were never submitted for publication. I have kept no notes on this bird since 1951 and have not hunted ducks or geese for many years. (It was during duck and goose hunts that I witnessed the eagle's preying habits.)

I have read that this eagle is not nearly so common as it once was over much of its range. It may be somewhat diminished in numbers locally but I think not to any serious extent. Thru recent conversation with ranch hands and oilfield workers I hear some of the birds are still breeding in the same places.

I feel the eagle has a good chance for survival in South Texas because they eat higher on the food chain than they do in some areas and therefore avoid, in some measure, the dangers of insecticides. Also, much of the area studied amounts to a huge game refuge. Vast acreage is owned by a few conservation-minded individuals who permit no hunting or trespassing. They are aware of the eagles and protect them along with the prairie chicken and other wildlife.

For TOS members who wish to see eagles I would suggest a visit to the Aransas Wildlife Refuge where one and sometimes two pairs nest with regularity. They cannot be seen with any predictability except at nesting time so a trip should be planned accordingly.

BOOK REVIEWS:

MEMOIRS OF A NATURALIST, by Herbert L. Stoddard, Sr. University of Oklahoma Press, $6.95; 303 pp., illus.

In recounting almost eighty years of achievement as a naturalist, taxidermist, ornithologist, and conservationist, Dr. Stoddard describes vividly the wildlife and virgin pine forests of his childhood in Florida, the fields and forests of Wisconsin and Illinois where he grew to manhood, and the coastal pine lands of Georgia and Florida where he now lives and works and where he conducted his monumental studies on the life history and ecology of the bobwhite quail.

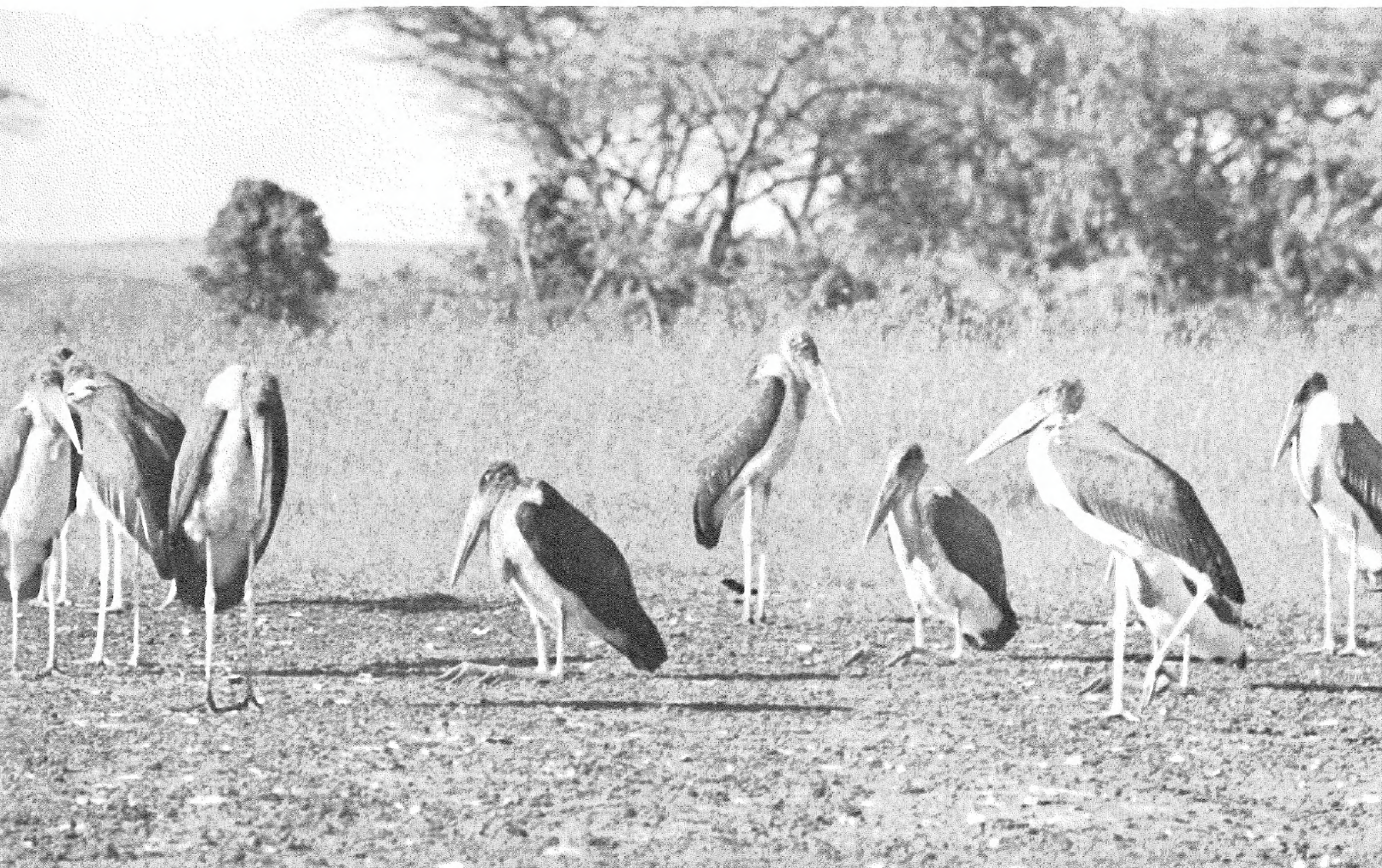
Realization of the need for life-history investigations in the conservation of endangered species of birds compelled Dr. Stoddard to leave an already rewarding career as a collector and taxidermist at the Milwaukee Public Museum and move to Georgia under the auspices of U.S. Bureau of Biological Survey in 1924 to begin studies of the bobwhite quail. These investigations, beginning at a time when the terms conservation and wildlife management were just coming into common usage, represent pioneering studies in the field of wildlife conservation. The gradual acceptance and implementation of the results of the quail studies, as recalled by Dr. Stoddard, particularly the importance of fire as a factor in the maintenance of quail habitat and the southeastern pine foests, are an interesting narrative of the impact of new knowledge gained from scientific study on older established theory and practice in forestry and game conservation that existed at that time.

The book is illustrated with many of Dr. Stoddard's photographs of birds and contains four color plates by Mr. George M. Sutton.—*Dan Womochel.*

* * *

ZOO MAN, by Herb Clement. The Macmillan Company, N.Y. 1969. 179 pp., illus.

Herb Clement was formerly a keeper at the Franklin Park Children's Zoo in Boston, where his work with a variety of animals prompted him to write down his ideas on zoos and zoo animals. *Zoo Man* is a collection of tendentious autobiographical sketches which may appeal to many people with a special interest in zoos; but there is a heavy dose of opinions and value-judgements which for the most part are distracting and lend themselves to neither enlightenment nor entertainment (e.g. "My advice to anyone who expects a magical solution to the litter problem . . . is for him to read another book. If he finds a solution there, let him get in touch with me at once!"—p. 101). It is doubtful if many of the opinions will appeal to the mature reader, but anyone who likes animals will certainly understand Clement's sensitivity towards his work. The book is basically about Clement (seven of the fourteen photographs portray the author) but the anecdotes would be more entertaining if the author had retreated somewhat into the background.—*Kent Rylander*



BULLETIN
OF THE
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